

CAHFSE Quarterly Report

April 1 – June 30, 2004

Reporting Units

Figure 1 shows the aggregate number of market hogs on all CAHFSE sites over time. These inventory numbers will be larger than those shown in Table 1, which reports only sites where fecal samples were collected. This graph may rise with the addition of more sites to CAHFSE or with the substitution of larger sites in CAHFSE.

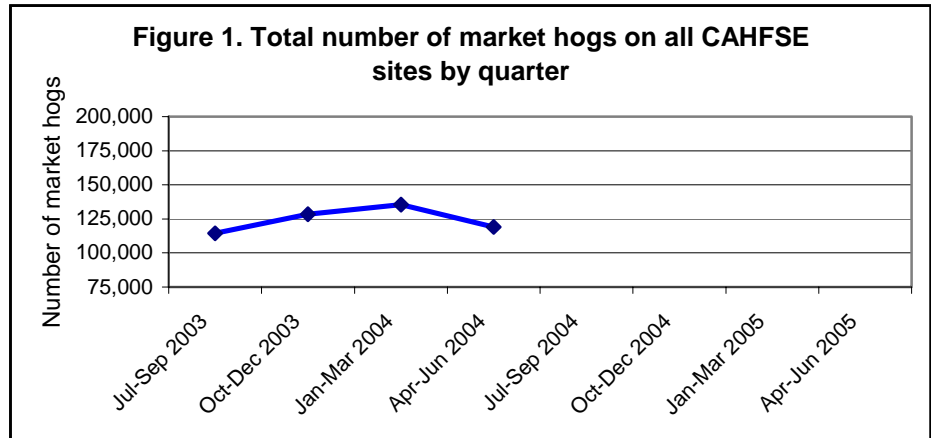
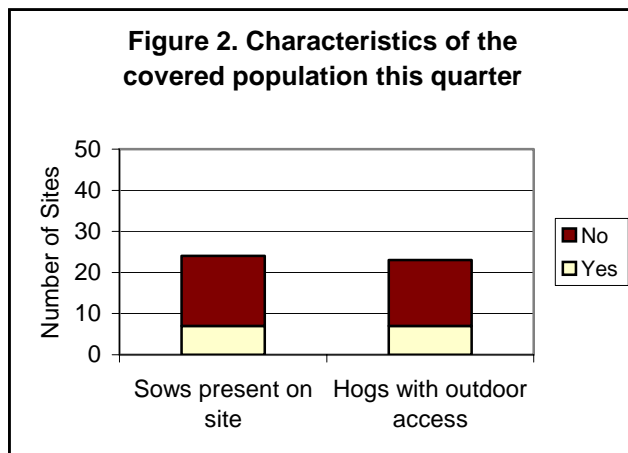


Table 1 shows the number of sites and pens where fecal samples were collected during this quarter. The total number of sites in this table may be less than the total number of sites participating in the CAHFSE project because some sites may not have had market hogs eligible for fecal sampling at the time of the visit for this quarter. The third column shows the total number of market hogs on sites where fecal samples were collected, and the last column shows the total number of market hogs in pens where fecal samples were collected.

Table 1. Structure of the covered population this quarter*

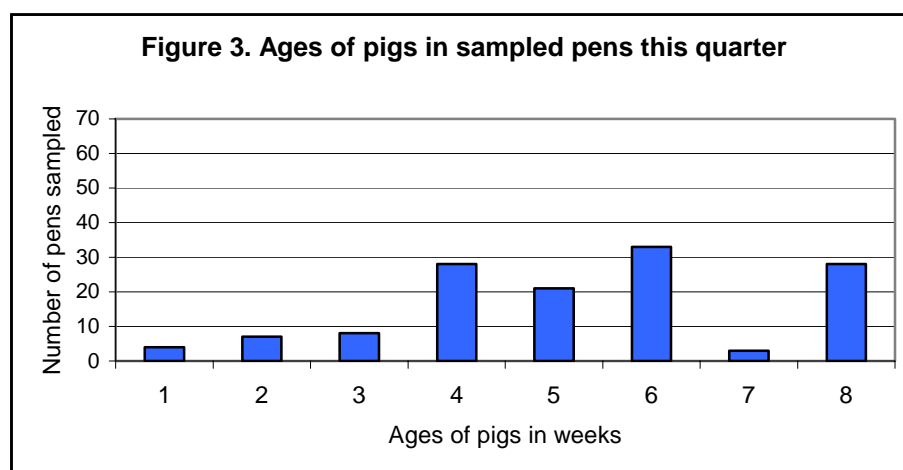
State	Sites		Pens	
	Number of sites	Market hog inventory	Number of pens	Market hog inventory
IA	7	17,752	35	1,706
MN	8	15,200	42	2,430
NC	6	51,073	48	1,010
TX	3	971	7	60
Total	24	84,996	132	5,206

*for sites where fecal samples were collected



To represent the diversity of swine production facilities, some farrow-to-finish sites were enrolled in CAHFSE as well as sites that had only weaned market hogs. Similarly, some indoor-only sites were enrolled as well as sites where hogs had outdoor access. Figure 2 shows the number of the sites sampled this quarter (i.e., sites where fecal samples were collected) with sows present or where hogs had outdoor access.

Figure 3 shows the number of pens sampled by the average age of hogs in those pens. The goal of CAHFSE was to collect fecal samples from pens of hogs nearing the end of the finishing phase, i.e., approximately 22 weeks of age or older.



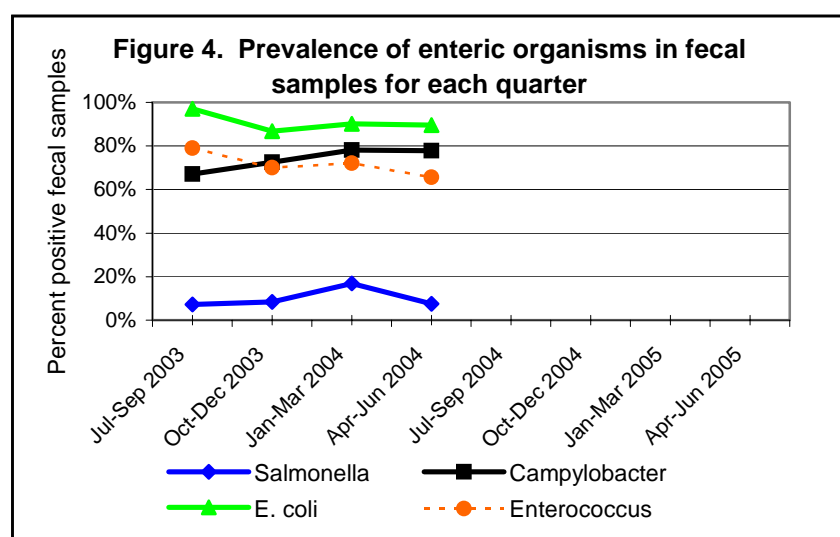
Enteric organisms

Table 2 shows prevalence of enteric organisms cultured from fecal samples this quarter.

Table 2. Summary of isolation of enteric organisms from fecal samples

Organism	Number of samples tested	Number of positive samples	Number of samples with multiple isolates	Number of isolates	Percent samples positive
<i>Salmonella</i>	843	63	4	67	7.5%
<i>Campylobacter</i>	338	263	0	263	77.8%
<i>E. coli</i>	338	303	0	303	89.6%
<i>Enterococcus</i>	338	222	0	222	65.7%

Figure 4 shows the prevalence of each enteric organism in fecal samples by quarter.



Tables 3 shows the site and pen prevalence of *Salmonella* recovery from fecal samples collected for each state this quarter.

Table 3. Number of fecal samples collected and *Salmonella* prevalence per site and per pen this quarter.

State	Number of samples collected	Number of sites	Number of sites positive for <i>Salmonella</i>	Number of pens	Number of pens positive for <i>Salmonella</i>
IA	225	7	1	35	4
MN	320	8	2	42	6
NC	240	6	4	48	15
TX	60	3	1	7	1
Total	845	24	8	132	26

Figure 5 shows the number of sites with various numbers of *Salmonella*-positive fecal samples this quarter.

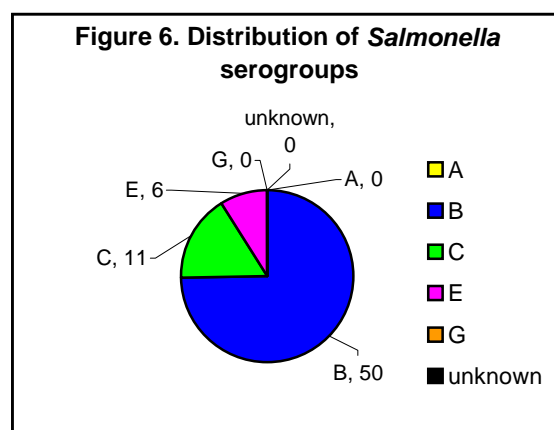
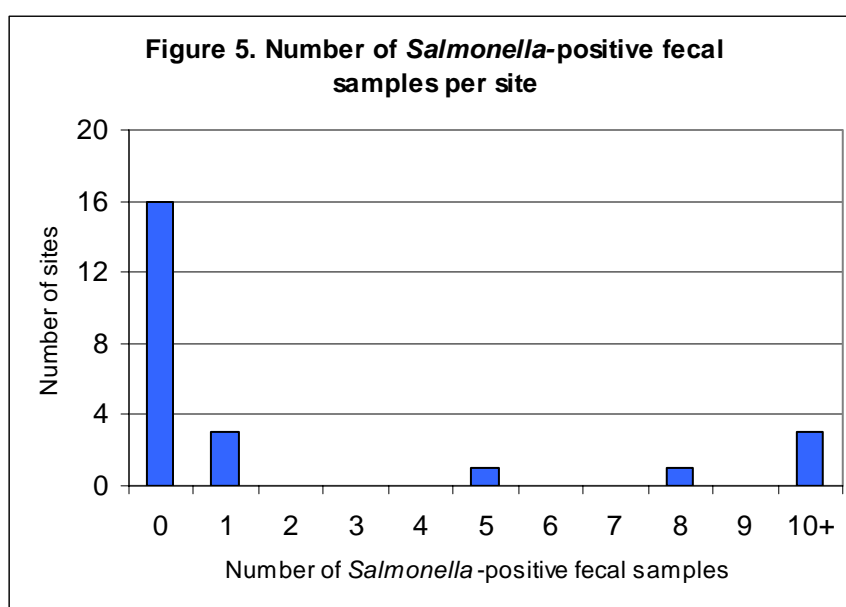


Figure 6 shows the *Salmonella* serogroups represented in positive fecal cultures this quarter.

Table 4 shows the most common *Salmonella* serotypes identified and the number of sites where these samples were isolated this quarter.

Table 4. Frequency of <i>Salmonella</i> serotypes cultured		
<i>Salmonella</i> serotype	Number of isolates	Number of sites
Derby	44	5
Bovis-morbificans	8	2
Give	5	1
6, 8 : r : -	2	1
Salmonella untypable	2	2
Typhimurium (copenhagen)	2	2
4, 12 : l : -	1	1
Mbandaka	1	1
(resubmitted)	1	1

Antimicrobial Resistance—*Salmonella*

Table 5 shows the percent of all *Salmonella* isolates from fecal samples that were resistant to each of the antimicrobial drugs on the panel. For the purpose of this analysis, isolates that were classified as ‘intermediate’ were considered susceptible.

Table 5. Number and percent of <i>Salmonella</i> isolates from fecal samples resistant to each antimicrobial tested this quarter.		
Antibiotic	Number of isolates resistant	Percent of isolates resistant
Amikacin	1	1.5%
Amoxicillin / Clavulanic acid	0	0.0%
Ampicillin	4	6.0%
Cefoxitin	0	0.0%
Ceftiofur	0	0.0%
Ceftriaxone	0	0.0%
Cephalothin	0	0.0%
Chloramphenicol	1	1.5%
Ciprofloxacin	0	0.0%
Gentamicin	0	0.0%
Kanamycin	2	3.0%
Naladixic acid	0	0.0%
Streptomycin	22	32.8%
Sulfa	28	41.8%
Tetracycline	61	91.0%
Trimethoprim / Sulfa	1	1.5%

Figure 7 shows the percent of *Salmonella* isolates from fecal samples that were resistant to the specified number of antimicrobials. The difference between the height of the bar and 100 percent is the percentage of isolates that were not resistant to any drugs in the panel.

